CLAIMS

1. A modified monovalent antibody fragment comprising a monovalent antibody fragment and at least one polymer molecule in covalent linkage characterised in that each cysteine residue located in the antibody fragment outside of the variable region domain of the fragment is either covalently linked through its sulphur atom to a polymer molecule or is in disulphide linkage with a second cysteine residue located in the fragment provided that at least one of said cysteine residues is linked to a polymer molecule.

2. An antibody fragment according to Claim 1 which is covalently linked to one, two or three polymer molecules through one, two or three cysteine residues located in the fragment outside of its variable region domain.

3. An antibody fragment according to Claim 1 or Claim 2 wherein the polymer is an optionally substituted straight or branched chain polyalkylene, polyalkenylene or polyoxyalkylene polymer or a branched or unbranched polysaccharide.

4. An antibody fragment according to Claim 3 wherein the polymer is an optionally substituted straight or branched chain poly(ethylene glycol), poly(propylene glycol) or poly(vinyl alcohol) and derivatives thereof.

5. An antibody fragment according to Claim 4 wherein the polymer is methoxy(polyethylene glycol) and derivatives thereof.

6. An antibody fragment according to any one of Claim 1 to Claim 5 in which the variable region domain is monomeric and comprises an immunoglobulin heavy (V_H) or light (V_L) chain variable domain, or is dimeric and contains V_H-V_H, V_H-V_L or V_L-V_L dimers in which the V_H and V_L chains are non-covalently associated or covalently coupled.

7. An antibody fragment according to Claim 6 wherein each V_H and/or V_L domain is covalently attached at a C-terminal amino acid to at least one other antibody domain or a fragment thereof.

8. An antibody fragment according to Claim 7 which is a Fab or Fab' fragment.

9. An antibody fragment according to any one of Claim 1 to Claim 8 covalently attached to one or more effector or reporter molecules.

10. A pharmaceutical composition comprising a monovalent antibody fragment according to any of the preceding claims together with one or more pharamaceuticaly acceptable excipients, diluents or carriers.